

location of major streets and highways within the urban area will influence the urban development pattern.

Other objectives of a thoroughfare plan include:

- \* To provide for the orderly development of an adequate major street system as land development occurs;
- \* To reduce travel and transportation costs;
- \* To reduce the cost of major street improvements to the public through the coordination of the street system with private action;
- \* To enable private interest to plan their actions, improvements, and development with full knowledge of public intent;
- \* To minimize disruption and displacement of people and businesses through long range advance planning for major street improvements;
- \* To reduce environmental impacts, such as air pollution, resulting from transportation, and
- \* To increase travel safety.

These objectives are achieved through improving both the operational efficiency of thoroughfares, and improving the system efficiency through system coordination and layout.

## Operational Efficiency

A street's operational efficiency is improved by increasing the capability of the street to carry more vehicular traffic and people. In terms of vehicular traffic, a street's capacity is defined by the maximum number of vehicles which can pass a given point on a roadway during a given time period under prevailing roadway and traffic conditions. Capacity is affected by the physical features of the roadway, nature of traffic, and weather.

Physical ways to improve vehicular capacity include:

- \* **Street widening** - widening of a street from two to four lanes more than doubles the capacity of the street by providing additional maneuverability for traffic.
- \* **Intersection improvements** - increasing the turning radii, adding exclusive turn lanes, and channelizing movements can improve the capacity of an existing intersection.
- \* **Improving vertical and horizontal alignment** - reduces the congestion caused by slow moving vehicles.
- \* **Eliminating roadside obstacles** - reduces side friction and improves a driver's field of sight.

Operational ways to improve street capacity include:

- \* **Control of Access** - a roadway with complete access control can often carry three times the traffic handled by a non-controlled access street with identical lane width and number.